

1 1. A system comprising:
2 a speech recognizer that recognizes spoken requests for television
3 programming information; and
4 an output device that generates responses to spoken requests for
5 television programming information.

1 2. The system of claim 1 including a module coupled to said
2 recognizer to implement conversational speech.

1 3. The system of claim 2 including a graphical user interface which
2 provides information in a visual form about television programming and a voice
3 user interface which responds to voice requests from the user, said graphical
4 user interface and said voice user interface communicating such that the focus of
5 one of said interfaces is communicated to the other.

1 4. The system of claim 2 including a memory that stores an indication
2 when a attribute recognized by the speech recognizer is spoken by the speech
3 synthesizer.

1 5. The system of claim 2 wherein said module produces a select
2 variable and a where variable from a query received from a user.

1 6. The system of claim 2 wherein said module develops a meaning
2 derived from said speech recognizer and historical information about previously

3 recognized speech and uses the historical information to modify the meaning
4 derived from said speech recognizer.

Sub BI 1 7. The system of claim 6 wherein said module determines whether a
2 query includes both a first and a second type of variable and if so, does not use
3 the historical information to alter the meaning derived from a the speech
4 recognizer.

1 8. The system of claim 7 wherein said module determines whether
2 only one of two variable types is contained in a spoken request and if so, merges
3 a variable with historical information to derive a meaning from the request.

Sub BI 1 9. ~~The system of claim 1 wherein said module parses and stores time~~
2 ~~attributes in a request.~~

1 10. The system of claim 9 wherein said module forms time attributes
2 with time ranges.

Sub BI 1 11. The system of claim 1 further including a processor coupled to a
2 speaker and microphone, the output from said speaker being subtracted from
3 the output of said microphone to reduce interference between the audio portion
4 of a television program and a spoken request.

1 12. The system of claim 1 including a television coupled to a set-top
2 box and a remote control that controls said set-top box.

1 13. The system of claim 1 wherein said output device is a speech
2 synthesizer that generates voice responses.

1 14. A method comprising:
2 recognizing spoken requests for television programming
3 information; and
4 generating responses to spoken requests for television
5 programming information.

1 15. The method of claim 14 including providing conversational speech
2 recognition.

1 16. The method of claim 15 including providing a graphical user
2 interface which generates information in a visual form about television
3 programming and a voice user interface which responds to voice requests from
4 the user, and communicating the focus of one of said interfaces to the other of
5 said interface.

1 17. The method of claim 15 including storing an indication when a
2 generated response includes a recognized attribute from the spoken request.

1 18. The method of claim 15 including parsing a select variable and a
2 where variable from a spoken request.

1 19. The method of claim 15 including storing meanings derived from
2 current and historical requests and using the historical requests to supplement
3 the meaning derived from said current requests.

1 20. The method of claim 14 including parsing and storing time
2 attributes in a request.

Sub BI
1 21. The method of claim 14 further including subtracting a signal from
2 a television from the input from the use to reduce interference between the
3 audio portion of a television program and a spoken request.

1 22. The method of claim 14 wherein generating responses includes
2 synthesizing spoken responses.

1 23. An article comprising a medium for storing instructions that cause a
2 processor-based system to:
3 recognize spoken requests for television program information; and
4 generate responses to spoken requests for television programming
5 information.

1 24. The article of claim 23 further storing instructions that cause a
2 processor-based system to provide conversational speech recognition.

1 25. The article of claim 24 further storing instructions that cause a
2 processor-based system to provide a graphical user interface which generates

3 information in a visual form about television programming and a voice user
4 interface which responds to voice request from the user, and to indicate the
5 focus of one of said interfaces to the other of said interfaces.

1 26. The article of claim 24 further storing instructions that cause a
2 processor-based system to store an indication when a generated response
3 includes a recognized attribute from the spoken request.

1 27. The article of claim 24 further storing instructions that cause a
2 processor-based system to parse a SELECT variable and a WHERE variable from
3 a spoken request.

1 28. The article of claim 24 further storing instructions that cause a
2 processor-based system to store meanings derived from the current and
3 historical request and use the historical request to supplement the meaning
4 derived from said current request.

1 29. The article of claim 23 further storing instructions that cause a
2 processor-based system to parse and store time attributes in a request.

1 30. The article of claim 23 further storing instructions that cause a
2 processor-based system to generate responses to spoken requests by
3 synthesizing spoken responses.